Editorial Index for volume 12 1980

INDEX OF ARTICLES

Alpine mole proves the case for TBMs. ..... Oct 30
Arlberg Expressway Tunnel.
Investigation and design for the ..... Part 1 Apr 46
Part 2 May 54
Construction of the tunnel tube ..... Part 3 Jun 45
Part 4 Jly 66
Design and construction of the ventilation shafts ..... Part 5 Oct 13
Articulated dump trucks turn to tunnelling. ..... Dec 37
Australia's Blue Mountains Zig Zag tunnels.
Paved track for, ... May 31
Austria's Gleinalm Tunnel. Lighting, ... Sep 21
Austrian style. Drilling into the '80s, ... Mar 33
Bag.' Grouting technology 'in the, ... Nov 38
Baillieston Surface Water Sewer. (Views from the site) ..... Apr 60
Balanced shield method. Earth pressure, ... Jan 47
Baltimore Subway. Locomotives play major role in, ... Mar 52
Bath City interceptor sewer uncovers some unpleasant surprises ..... Apr 24
Belt conveyor for muck removal. Up, up and away. Vertical, ... Nov 50
Bentonite tunnelling beneath major services in loose ground. ..... Jun 14
Bolmen water tunnel makes slow but sure progress. ..... Jun 35
Bomb shelter for 9500 is tunnelling on the grand scale. Helsinki, ... Jun 55
Boring through a railway embankment. Ground movement as a result of thrust, ... Sep 11
BR/SNCF proposal for a single track Channel Tunnel. ..... Jun 71
Canopy.' Open invert shield speeds mine development. 'Walking, ... Jul 50
Catalogue of works (ITA) ..... Jun 31
Chalk containing flints. A laboratory and pilot-scale study on the cutting of, ... Jan 29
Channel Tunnel. A history of the, (BTS) ..... May 60
Channel Tunnel. BR/SNCF proposal for a single track ..... Jun 71
Chicago. Largest TBM holes through in, ... Nov 49
Chicago's floods at bay. Tunnel and reservoir plan to keep, ... Mar 24
CIRIA plans site tests for sprayed concrete. ..... Jul 20
Classification: Continental and British practice. Ground, ... Jul 59
Communication by Mini Tunnel in London's square mile. ..... Sep 39
Compressed air sickness down the hole. Coping with, ... Jan 64
Concrete. CIRIA plans site tests for sprayed, ... Jul 20
Concrete in tunnels. Controlling the quality of, ... Jul 17
Concrete lining. Sewer reconstruction at West Ham uses One-Pass, ... Sep 35
Concrete Technology. Some aspects of, ... May 67
Concrete tunnel replaces 120 year old town sewer. ..... Jan 33
Construction. Offshore oil tunnels: Part 2. Tunnelling for oil: The system and its, .. Sep 40
Construction of the Arlberg Expressway Tunnel tube. ..... Part 3 Jun 45
Part 4 Jul 66
Consultants—The most valuable commodity. (British Tunnelling Part 2) ..... Jul 53
Continental and British practice. Ground classification: ..... Jul 59
Contractor should avoid. Pitfalls the specialist underground, ... Dec 42
Contractors—A time for decisions. (British Tunnelling Part 2) ..... Jun 22
Contractual practices (ITA) ..... Jan 51
Controlling the quality of concrete in tunnels. ..... Jul 17
Conveyor for muck removal. Up, up and away. Vertical belt, ... Nov 50
Cost. Offshore oil tunnels—Part 3. Tunnelling for oil: what it all would, ... Oct 34
Cutter penetration. Mechanics of disc, ... Jul 22
Cutting of chalk containing flints. A laboratory and pilot-scale study on the, ... Jan 29
Deep tunnels and difficult rock formations. Application of the NATM in, ... Mar 17
Design models for tunnelling. Structural, (ITA) ..... Nov 39
Difficult ground. Tunnel boring machines in, ... Jan 15
Difficult rock formations. Application of the NATM in deep tunnels and, ... Mar 17
Dinorwic. Progress at, ... Jul 44
Dinorwic shaft sunk in record time. ..... Oct 56
Disc cutter penetration. Mechanics of, ... Jul 22
Drakensberg's tunnels. Waterproof plastic lines, ... Dec 41
Drakensberg tunnel. 80 tonne formwork for, ... Apr 65
Drift and shafts at the Selby coalfield development. Progress on the, (BTS) ..... Jan 53
Drilling into the '80s, Austrian style. ..... Mar 33
Dump truck and mini TV win design award. ..... Jun 75
Dump truck from Volvo will speed muck removal. New loader and, ... Mar 20
Dump trucks turn to tunnelling. Articulated, ... Dec 37
Earth pressure balanced shield method (Japan). ..... Jan 47
Eurotunnel 80—A feast for the world's tunnellers (preview). ..... Sep 62
Face ends technology on show at Harrogate. ..... Dec 54
'Faceheader'. Introducing the NCB, ... Sep 73
Finnish metro. Swedish know-how for, ... Jun 34
Formwork for Drakensberg tunnel. 80 tonne, ... Apr 65
Formwork. Selection of tunnelling, ... Nov 15
Frankfurt Metro. Application of the NATM to the construction of the, ... Sep 44
Frejus: vent shaft excavation in Europe's top tunnel. Fresh air for, ... May 25
French tunnels help form inter-continental link. ..... Nov 40
Geotechnical aspects of the Ujo Tunnel construction using the NATM. ..... Oct 50
Giessbach Tunnel opens up a new route to the top. ..... Mar 50
Glasgow. Tunnel lining renovated in, ... Mar 78
Glasgow Underground. Re-railing, (Views from the site) ..... Apr 62
Gleinalm Tunnel. Lighting Austria's, ... Sep 21
Ground classification: Continental and British practice. (BTS) ..... Jul 59
Ground movement as a result of thrust boring through a railway embankment. .... Sep 11
Groundwater. Multiple grouting techniques beat Stockholm's, ... Apr 41
Grout pumping saves hot mine. Regular, ... Jan 79
Grouting equipment. Range of, ... Jul 25
Grouting techniques beat Stockholm's groundwater. Multiple, ... Apr 41
Grouting technology 'in the bag'. ..... Nov 38
Heat in Turku. Tunnel will turn up the, ... May 42
Helmet gives fresh air at the face. ..... Jan 69
Helsinki bomb shelter for 9500 is tunnelling on the grand scale. ..... Jun 55
Highway tunnel. Japan's longest, ... Nov 20
Hire it—don't buy it! ..... Sep 83
History of the Channel Tunnel. A, (BTS) ..... May 60
Hong Kong MeTRo completed early and within budget. ..... Apr 14
Hong Kong MeTRo. Ventilating the, ... Sep 54
Hong Kong tunnel goes ahead. Mezzanine for, ... Oct 69
Hydraulic drills explore in Ireland. ..... May 22
Hydraulic jumbos win the day. ..... Jul 65
Hydroelectric station tunnelling in Northern Sweden. ..... Nov 28
Immersed tube carries coal conveyor across bay. ..... Mar 57
Investigation and design for the Arlberg Expressway Tunnel. ..... Part 1 Apr 46
Part 2 May 54
Ireland. Hydraulic drills explore in, ... May 22
ITA Report (Brussels 1980): Getting into gear now. ..... Sep 69
Japan's longest highway tunnel. ..... Nov 20
Jumbos. Sri Lanka success for Anglo-Finnish, ... Nov 46
Jumbos win the day. Hydraulic, ... Jul 65
Laboratory. Linear rock cutting rig tests tools in the, ... Dec 10
Lewes Tunnel nears completion. ..... Jun 56
Lighting Austria's Gleinalm Tunnel. ..... Sep 21
Lining renovated in Glasgow. Tunnel, ... Mar 78
Lining. Sewer reconstruction at West Ham uses One-Pass concrete, ... Sep 35
Loader and dump truck from Volvo will speed muck removal. New, ... Mar 20
Loading and transporting. A new combination for, ... Mar 39
Loco. Safer mining, ... Oct 67
Locomotives play major role in Baltimore Subway. ..... Mar 52
London Transport planning. (BTS) ..... Jul 62
Loose ground. Bentonite tunnelling beneath major services in, ... Jun 14
Low profile trucks for Norwegian tunnels. ..... Oct 42
Machine tunnelling contracts. Site investigations for, ... Mar 36
Machines now the main drive for Swiss tunnellers. ..... Dec 26
Manhattan Subway. Speedy mucking out is key to TBM success on, ... Dec 45
Mechanics of disc cutter penetration. ..... Jul 22
Megget-Manor Water Tunnel. (Views from the Site) ..... Apr 59
Melbourne Metro loop nears completion. ..... Nov 45
Metro. Application of the NATM to the construction of the Frankfurt, ... Sep 44
MeTRo completed early and within budget. Hong Kong, ... Apr 14
Metro loop nears completion. Melbourne, ... Nov 45
Metro. Swedish know-how for Finnish, ... Jun 34
MeTRo. Ventilating the Hong Kong, ... Sep 54
Mezzanine for Hong Kong tunnel goes ahead. ..... Oct 69
Mini Tunnel in London's square mile. Communication by, ... Sep 39
Mining development system claims higher advance rates. ..... Jun 50
Mole proves the case for TBMs. Alpine, ... Oct 30
Movement as a result of thrust boring through a railway embankment. Ground, ... Sep 11
Muck removal. Up, up and away. Vertical belt conveyor for, ... Nov 50
Mucking out is key to TBM success on Manhattan Subway. Speedy, ... Dec 45
NATM. Geotechnical aspects of the Ujo Tunnel construction using the, ... Oct 50
NATM in deep tunnels and difficult rock formations. Application of the, ... Mar 17
NATM to the construction of the Frankfurt Metro. Application of the ..... Sep 44
NCB 'Faceheader'. Introducing the, ... Sep 73
North Korea: tunnels undermining the truce? ..... Jan 62
Norwegian tunnels. Low profile trucks for, ... Oct 42
Oil beneath the sea—A new solution? Tunnelling for, ... Part 1 Jul 26
Oil cavern. Swedish underground runs 80m below, ... Oct 69
Oil out of sight. Putting the, ... Jun 36
Oil: The system and its construction. Tunnelling for, ... Part II Sep 40
Oil: What it all would cost. Tunnelling for, ... Part III Oct 34
One-Pass concrete lining. Sewer reconstruction at West Ham uses, ... Sep 35
'One Pass' system. A first at Oxford for the, ... Nov 57
Oxford for the 'One Pass' system. A first at, ... Nov 57
Paved track for Australia's Blue Mountains Zig Zag tunnels. ..... May 31
Pilot-scale study on the cutting of chalk containing flints. A laboratory and, ... Jan 29
Pipe jacking at the crossroads. ..... Oct 40
Pitfalls the specialist underground contractor should avoid. ..... Dec 42
Planning. London Transport, (BTS) ..... Jul 62
Plastic lines Drakensberg's tunnels. Waterproof, ... Dec 41
Pre-reinforcement system for large underground openings. 'Rib in Roc' ..... Oct 23
Profiles. Measuring, ... Sep 67
Quality of concrete in tunnels. Controlling the, ... Jul 17
Rail systems. Tunnelling research for US highways and urban, ... Dec 15
Reconstruction at West Ham uses One-Pass concrete lining. Sewer, ... Sep 35
Relining the resin segment way. Sewer, ... Nov 56

Research (ITA) ..... Apr 31
Research for US highways and urban rail systems. Tunnelling..... Dec 15
Research surfaces at STUVA. Tunnel..... Apr 53
Research: the only road to success. Tunnelling..... Oct 63
Resin segment way. Sewer relining the..... Nov 56
'Rib-in-Roc' pre-reinforcement system for large underground openings..... Oct 23
River tunnel. Trevithick's 1807..... Nov 43
Roadheader technology bites into the '80s..... May 17
Rock cutting rig tests tools in the laboratory. Linear..... Dec 10
Rockbolts. Tubular..... Sep 67
Rockstore Exhibition Preview..... Jun 41
Safer mining loco..... Oct 67
Safety (ITA)..... May 35
Schacht Prosper 10—sinking into the future..... Jan 35
Segment way. Sewer relining the resin..... Nov 56
Seismic effects on underground structures (ITA)..... Dec 12
Selby coalfield development. Progress on the drift and shafts at the..... Jan 53
Selection of tunnelling formwork..... Nov 15
Sewer. Baillieston Surface Water. (Views from the site)..... Apr 60
Sewer. Concrete tunnel replaces 120 year old town..... Jan 33
Sewer reconstruction at West Ham uses One-Pass concrete lining..... Sep 35
Sewer relining the resin segment way..... Nov 56
Sewer uncovers some unpleasant surprises. Bath City interceptor..... Apr 24
Shaft sunk in record time. Dinorwic..... Oct 56
Shafts at the Selby coalfield development. Progress on the drift and..... Jan 53
Shafts. Design and construction of the ventilation. (Arlberg Part 5)..... Oct 13
Shelter for 9500 is tunnelling on the grand scale. Helsinki bomb..... Jun 55
Shield speeds mine development. 'Walking canopy' open invert..... Jul 50
'Shock absorber' in underground control centre..... Nov 12
Sickness down the hole. Coping with compressed air..... Jan 64
Sinking into the future. Schacht Prosper 10—..... Jan 35
Site investigation—How much should be done?..... Nov 11
Site investigations for machine tunnelling contracts..... Mar 36
Sprayed concrete. CIRIA plans site tests for..... Jul 20
Sri Lanka success for Anglo-Finnish jumbos..... Nov 46
Standardisation (ITA)..... Mar 68
Stockholm conference explores the use of sub-surface space..... Jun 32
Stockholm's groundwater. Multiple grouting techniques beat..... Apr 41
STUVA. Tunnel research surfaces at..... Apr 53
Structural design models for tunnelling (ITA)..... Nov 39
Structures. Seismic effects on underground. (ITA)..... Dec 12
Sub-surface planning. (ITA)..... Oct 27
Sub-surface space. Stockholm conference explores the use of..... Jun 32
Subway. Locomotives play major role in Baltimore..... Mar 52
Sweden. Hydroelectric station tunnelling in Northern..... Nov 28
Swedish know-how for Finnish metro..... Jun 34
Swedish phones are war proof..... Nov 30
Swedish underground runs 80m below oil cavern..... Oct 69
Swelling rocks commission formed..... Jun 31
Swiss tunnellers. Machines now the main drive for..... Dec 26

TBM holes through in Chicago. Largest..... Nov 49
TBM success on Manhattan Subway. Speedy mucking out is key to..... Dec 45
TBMs. Alpine mole proves the case for..... Oct 30
TBMs in difficult ground..... Jan 15
Technology on show at Harrogate. Face ends..... Dec 54
Technology. Some aspects of concrete..... May 67
Thrust boring through a railway embankment. Ground movement as a result of..... Sep 11
Trevithick's 1807 river tunnel..... Nov 43
Trucks for Norwegian tunnels. Low profile..... Oct 42
Trucks turn to tunnelling. Articulated dump..... Dec 37
Tubular rockbolts..... Sep 67
Tunnel and reservoir plan to keep Chicago's floods at bay..... Mar 24
Tunnel will turn up the heat in Turku..... May 42
Tunnelling beneath major services in loose ground. Bentonite..... Jun 14
Tunnelling for oil beneath the sea—A new solution..... Part I Jul 26
Tunnelling for oil: The system and its construction..... Part II Sep 40
Tunnelling for oil: What it all would cost..... Part III Oct 34
Tunnelling on the grand scale. Helsinki bomb shelter for 9500 is..... Jun 55
Tunnelling research for US highways and urban rail systems..... Dec 15
Tunnelling research: the only road to success..... Oct 63
Turku. Tunnel will turn up the heat in..... May 42
TV win design award. Dump truck and mini..... Jun 75

Ujo Tunnel construction using the NATM. Geotechnical aspects of the..... Oct 50
Underground control centre. 'Shock absorber' in..... Nov 12
Underground planning. (BTS)..... Mar 65
Underground. Re-railing Glasgow. (Views from the site)..... Apr 62
Underground structures. Seismic effects on. (ITA)..... Dec 12
Underwater tunnel is 150 years old. First..... Sep 27
Up, up and away. Vertical belt conveyor for muck removal..... Nov 50
US highways and urban rail systems. Tunnelling research for..... Dec 15

Venezuelan development. Water tunnel aids..... Oct 49
Vent shaft excavation in Europe's top tunnel. Fresh air for Fréjus:..... May 25
Ventilating the Hong Kong MeTRo..... Sep 54
Ventilation shafts. Design and construction of the. (Arlberg Part 5)..... Oct 13
Views from the site..... Apr 59

'Walking Canopy' open invert shield speeds mine development..... Jul 50
Water tunnel aids Venezuelan development..... Oct 49
Waterproof plastic lines Drakensberg's tunnels..... Dec 41
West Ham uses One-Pass concrete lining. Sewer reconstruction at..... Sep 35
Zig Zag tunnels. Paved track for Australia's Blue Mountains..... May 31

INDEX OF AUTHORS

Attewell, Dr P B..... Nov 11
Bradbury, H..... Nov 38
Braun, Dipl Ing W M..... Mar 17
Brooks, Dr D..... Oct 27
Clark, C R..... Nov 11
Crabb, G I..... Jan 29
Doughty, M..... Sep 35
Duncan, S D..... May 31
Farmer, I W..... Jul 22
Farquhar,O C..... Dec 15
Forrest, W..... Jan 53
Fumimoto, N..... Nov 20
Garrett, R E..... Dec 45
Glossop, N H..... Jul 22
Goodman, D..... Jul 17
Harding, P G..... Jan 35, 62, Mar 33, 50, Apr 41, May 25, Jun 22, Jul 53, Sep 62, 73, Oct 30, 63, Nov 40, 56
Hignett, Dr H J..... Jan 29
Hook, D..... Nov 45
Howells, D A..... Dec 12
Jacomb-Hood, E W..... Apr 59, Jun 31
Jeffrey, R..... Nov 15
John, Dr M..... Apr 46, May 54, Jun 45, Jul 66, Oct 13
King, Dr J D..... Jan 64
Lamming, R A E..... Jun 71
Leeney, J G..... Jan 51, Sep 69, Nov 50
Leira, F D..... Oct 50
Lyons, A C..... Nov 39
McFeat-Smith, Dr I..... Jan 15, Mar 36
McPherson, P et al..... Apr 59
Marshall, A..... Oct 40, Dec 42
Martin, D V..... Mar 24, Apr 14, May 42, 67, Jun 32, 55, Jul 44, Sep 54, Nov 28, 46, Dec 26, 54
Matsushita, H..... Jan 47
Muir Wood, Dr A..... May 60
Neilly, W M et al..... Apr 60
New, B M et al..... Jun 14
Obermaier, Dipl Ing H..... May 17
O'Reilly, M P..... Apr 31
Oyanguren, P R..... Oct 50
Polz, Dr Ing K et al..... Mar 57
Prochazka, Ing H..... Sep 21
Sabels, Dr B E..... Apr 53
Searle, W J..... May 35
Sehgal, J P..... Jul 17
Snowdon, R A et al..... Dec 10
Stillborg, B L..... Oct 23
Tarkoy, Dr P J..... Jan 15, Mar 36
Tervonen, T..... May 42, Jun 55
Toombs, A F..... Sep 11
Veasey, D J..... Mar 68
Wallace, N C et al..... Apr 62
Walton, B..... Jul 26, Sep 40, Oct 34
Way, A..... Jun 41
West, G..... Sep 11
Wort, K G..... Jul 50

OPINION

Give us the facts!..... (Comment)..... Jan 5
Final solution for the floods..... (Comment)..... Mar 5
Mud on their boots..... (Drifter)..... Mar 69
Stand up, the Engineers!..... (Comment)..... Apr 5
Tunnel jacking comes of age..... (Comment)..... May 5
Good news and bad news..... (Comment)..... Jun 5
The next 20 years..... (Drifter)..... Jun 11
The sabbatical futurologist..... (Comment)..... Jly 5
Vanishing visitors..... (Comment)..... Sep 5
Blind end of the tunnel..... (Comment)..... Oct 5
Dodging the issue..... (Drifter)..... Oct 52
International assignment..... (Comment)..... Nov 5
Call in the private sector..... (Drifter)..... Nov 43
Technology at the Face..... (Comment)..... Dec 5

THE PUBLISHER, EDITOR AND STAFF
OF TUNNELS & TUNNELLING
WISH ALL OUR READERS AND ADVERTISERS
ALL OVER THE WORLD
A VERY HAPPY CHRISTMAS
AND PROSPEROUS NEW YEAR